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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/034,816	12/27/2001	Earle H. Sherrod	16,876	1500
23556	7590	07/15/2004	EXAMINER	
KIMBERLY-CLARK WORLDWIDE, INC. 401 NORTH LAKE STREET NEENAH, WI 54956			SINGH, ARTI R	
			ART UNIT	PAPER NUMBER
			1771	

DATE MAILED: 07/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/034,816

Applicant(s)

SHERROD ET AL.

Examiner

Ms. Arti Singh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 11-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date Several
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

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DETAILED ACTION

Response to Amendment

1. The Examiner has carefully considered Applicant's remarks filed on 04/21/04. All previously made rejections are now withdrawn and a new rejection has been set forth below, hence all arguments are moot. Also being remitted are several IDS that were not remitted with the last response.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

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3. Claims 1-10 are rejected under 35 U.S.C. 102(e) as being US 2003/0232556 A1 issued to Toro et al.

It should be noted that either the Continuation application date of the PCT or the WO 00122216.5 may be used to establish the prior art date as they both were published in English.

The invention of Toro et al. relates to a non slip, liquid impermeable moisture vapor permeable composite structures comprising a hydrophilic thermoplastic film which is coated onto a support layer, the support layer having a coefficient of friction greater than 1. The composite structures of the present invention can be used a variety of applications wherein moisture vapor permeability and anti-slipping properties are desirable, such as in absorbent articles for example breast pads, perspiration pads, diapers, sanitary napkins, panty liners and incontinence products, and also as protective bedding covers, protective clothing and the like (abstract and [0002]). The non slip, liquid impermeable moisture vapor permeable composite structures comprising a hydrophilic thermoplastic film which is coated onto a support layer, the support layer having a coefficient of friction greater than 1 [0016]. The composite structures of the present invention can be used a variety of applications wherein moisture vapor permeability and anti-slipping properties are desirable, such as in absorbent articles for example breast pads, perspiration pads, diapers, sanitary napkins, panty liners and incontinence products, and also as protective bedding covers, protective clothing and the like [0017]. The composite structures comprise a hydrophilic thermoplastic film made from a moisture vapor permeable thermoplastic composition. Suitable thermoplastic compositions for use herein are thermoplastic compositions known to those skilled in the art for making hydrophilic continuous moisture vapor permeable, liquid impermeable layers or films ("monolithic films") having the characteristics of moisture vapor permeability

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and liquid imperviousness. Typically the thermoplastic film of the composite structures according to the present invention is made from a moisture vapor permeable thermoplastic composition which comprises as an essential component from 5% to 100% by weight of said film of a polymer or mixture of polymers. More preferably the thermoplastic composition comprises from 10% to 80% and most preferably from 25% to 70% by weight of said polymer. ²[0019-0021]. Thermoplastic compositions having such viscosities can also provide very thin films or layers. Typically the thermoplastic film used in the composite structures of the present invention have a thickness of less than 200 microns, preferably less than 130 microns, more preferably less than 80 microns, even more preferably from 70 to 0.5 microns and most preferably from 55 to 2 microns. Advantageously the films used herein allow for films to be produced at greatly reduced thickness, whilst maintaining the mechanical properties of the film such that no failures concerning the uniformity of the film such as breakages or the presence of apertures arise [0029 & 0030]. In paragraph 0037-0039 the instant patent teaches that tackifying resins or tackifiers may be used within the composite and have the characteristics of a pressure sensitive adhesive [0040].

According to the present invention a moisture vapor permeable, liquid impervious composite structure can be formed from the thermoplastic composition described herein by coating said thermoplastic composition onto a support layer/substrate. The films (also called layers) formed from the thermoplastic compositions of the present invention preferably have a moisture vapor transport rate of at least $100 \text{ g/m}^2 \cdot 24 \text{ h}$, preferably at least $300 \text{ g/m}^2 \cdot 24 \text{ h}$, most preferably at least $500 \text{ g/m}^2 \cdot 24 \text{ h}$ [0048]. Such embodiment provides a moisture vapor permeable, liquid impervious composite structure wherein the contribution of the film formed from the thermoplastic composition described herein to the performance of the composite material resides only in the provision of a liquid barrier and hence could be

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advantageously provided as thinly as possible. The remaining performance physical criterion being preferably provided by the provided structure, that therefore preferably acts also as a support layer. The substrate, or support layer may be any useful layer which is also moisture vapor permeable, preferably having a moisture vapor permeability of at least $100 \text{ g/m}^2 \cdot 24 \text{ h}$, more preferably at least $300 \text{ g/m}^2 \cdot 24 \text{ h}$, and most preferably at least $500 \text{ g/m}^2 \cdot 24 \text{ h}$. Suitable support layer for use herein include two dimensional, planar micro and macroporous films; macroscopically expanded films; formed apertured films; nonwoven and woven layers.

According to the present invention the apertures in said layer may be of any configuration, but are preferably spherical or oblong and may also be of varying dimensions. The apertures preferably are evenly distributed across the entire surface of the layer, however layers having only certain regions of the surface having apertures are also envisioned. Suitable two dimensional porous planar layers may be made of any material known in the art, but are preferably manufactured from commonly available polymeric materials. Suitable materials are XMP-1001 of Minnesota Mining and Manufacturing Company, St. Paul, Minn., USA and Exxair XBF-101W, supplied by the Exxon Chemical Company. As used herein the term two dimensional planar layer refers to layers having a depth of less than 1 mm, preferably less than 0.5 mm, wherein the apertures have an average uniform diameter along their length and which do not protrude out of the plane of the layer. The apertured materials for use as the support layer may be produced using any of the methods known in the art such as described in EPO 293 482 and the references therein. In addition the dimensions of the apertures produced by this method may be increased by applying a force across the plane of the layer (i.e. stretching the layer). Suitable apertured formed films include films which have discrete apertures which extend beyond the horizontal plane of the garment facing

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surface of the layer towards the core thereby forming protuberances. The protuberances have an orifice located at its terminating end. Preferably said protuberances are of a funnel shape. The apertures located within the plane and the orifices located at the terminating end of protuberance themselves maybe circular or non circular provided the cross sectional dimension or area of the orifice at the termination of the protuberance is smaller than the cross sectional dimension or area of the aperture located within the garment facing surface of the layer. Preferably said apertured performed films are uni directional such that they have at least substantially, if not complete one directional fluid transport towards the core. Preferred support layers for use herein include woven and nonwoven layers. The composites of this preferred embodiment according to the present invention are particularly advantageous as they allow the possibility of providing a composite wherein the thermoplastic composition may be coated onto the support layer/substrate as a layer with the desired thickness. Typical coating conditions and apparatuses known in the art for the direct coating of low viscosities hot melts can be readily utilized in order to provide the thermoplastic composition at the desired thickness. At least at the coating temperature, the thermoplastic composition in form of a layer preferably exhibits adhesive properties on the supportive substrate in order to form the preferred composite such that no additional adhesive is required to achieve a permanent attachment between the thermoplastic composition and the substrate. Preferably the moisture vapor permeable, liquid impervious composite structures have an overall moisture vapor transfer rate of at least 100 $\text{g/m}^2 \cdot 24 \text{ h}$, more preferably at least 300 $\text{g/m}^2 \cdot 24 \text{ h}$, and most preferably at least 500 $\text{g/m}^2 \cdot 24 \text{ h}$. The support layer as defined herein has a first and a second opposing surface. The first surface of the support layer is those facing the thermoplastic film of the composite structure and the second surface of the support layer is those opposite said first

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surface. According to the present invention the support layer of the composite structure is provided on the surface called herein second surface of the support layer with non-slipping properties. The term `non-slip` is used generally herein to describe liquid impermeable, moisture vapor permeable composite structures of the present invention, having a surface (typically the surface of the support layer not facing the thermoplastic film) which has been modified/treated so as to result in substantially reduced slippage when used in contact against human skin or another layer of an absorbent article or any other surfaces. The static coefficient of friction of this surface is generally more than 1, preferably more than 1.3, even more preferably more than 1.5 and most preferably more than 1.7.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ms. Arti Singh whose telephone number is 571-272-1483. The examiner can normally be reached on M-F 9-7pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ms. Arti Singh

7/12/04

Primary Examiner - 1771